

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L331	4	(L224 L223) and ((voltage near1 time) voltage/time voltage\$1time) and counter and latch	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L330	12	(L224 L223) and ((voltage near1 time) voltage/time voltage\$1time)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L329	13	(digital adj pixel) same counter same latch\$3	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L328	8	fossum.in. and (digital adj pixel)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L327	2	fowler.in. and (digital adj pixel)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L326	42	(digital adj pixel).ti.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L325	31	(analog and digital and pixel).ti.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L324	2	a/d near2 pixel same row adj select	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L323	16	fowler.in. and voltage same time and pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L322	20	L218 and (amplifier source)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L321	5	L218 and voltage near2 conver\$5 near2 time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L320	14	L218 and voltage near2 conver\$5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L319	24	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5877715-\$ or US-5990948-\$ or US-6067113-\$ or US-6069377-\$ or US-6473122-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L318	70	"348"/\$6 and (latch same counter) and (pixel same time same voltage) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L317	12	(L214 L212) and ((voltage near1 time) voltage/time voltage\$1time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L316	16	((satoshi near1 shigematsu).in. and (hiroki near1 morimura).in.) and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L315	92	"348"/\$6 and ((voltage\$1 near7 time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L314	32	348/302 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L313	6	((voltage\$2time\$1)) near2 (converter\$1 conversion\$1) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L312	3	((voltage\$2time\$1)) same counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L311	1	10/059488 and start\$3	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L310	1	"6330030".pn. and time	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L309	1	"6330030".pn. and counter	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L308	1	"6587145".pn.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L307	1	"6587145".pn. and (column row)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L306	1	"6587145".pn. and readout	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L305	1	"6587145".pn. and digital same time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L304	1	"6438257".pn. and digital same sense\$1	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L303	1	"6438257".pn. and digital same sense	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L302	1	"5471515".pn.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L301	1	10/059488	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L300	1	"6330030".pn. and time	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L299	1	"6330030".pn. and counter	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L298	1	"6587145".pn.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L297	1	"6587145".pn. and (column row)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L296	1	"6587145".pn. and readout	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L295	1	"6587145".pn. and digital same time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L294	1	"6438257".pn. and digital same sense\$1	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L293	1	"6438257".pn. and digital same sense	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L292	1	"5471515".pn.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L291	1	10/059488	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L290	562	L288 L289	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L289	134	348/304.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L288	463	348/302.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L287	0	10/059488 and stagger\$4	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L286	43	(digital near2 camera near2 machine near2 vision)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L285	0	(digital near2 camera near2 for near2 machine near2 vision)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L284	0	(digital adj camera adj for adj machine adj vision)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L283	0	(digital adj camera adj for adj machine adj vision) near3 simoni	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L282	120	fingerprint\$3 and ((voltage\$1 near time) (voltage\$1time)) and (count\$3)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L281	463	348/302.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L280	134	348/304.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L279	358	348/312.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L278	377	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and stagger\$4	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L277	0	"6587145".pn. and (column row) adj readout	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L276	15	L275 and (voltage near1 time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L275	30	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-5777596-\$ or US-5877715-\$ or US-5990948-\$ or US-6021172-\$ or US-6067113-\$ or US-6069377-\$ or US-6330030-\$ or US-6438257-\$ or US-6473122-\$ or US-6498576-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$ or US-6965407-\$). did. or (US-6990219-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L274	305	((voltage near1 time) voltage/time voltage\$1time) adj converter	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L273	0	((voltage near1 time) voltage/time voltage\$1time) adj converter and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27

## EAST Search History

L272	0	((voltage near1 time) voltage/time voltage\$1time) adj convertor and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L271	204	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and ((counter same latch) same clock\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L270	287	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and (counter same latch) and clock	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L269	305	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and (counter same latch)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L268	326	((voltage near1 time) voltage/time voltage\$1time) and row and column and (counter same latch)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L267	907	((voltage near1 time) voltage/time voltage\$1time) and row and column and count\$3 and latch	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L266	4722	((voltage near1 time) voltage/time voltage\$1time) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L265	122	(hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L264	106	(satoshi near1 shigematsu).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L263	0	10/059488 and amplif\$4	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L262	0	10/059488 and source\$1follower	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L261	0	10/059488 and source	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L260	17	L259 and amplifier	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L259	24	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5877715-\$ or US-5990948-\$ or US-6067113-\$ or US-6069377-\$ or US-6473122-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L258	258	(latch same counter) and (pixel same time same voltage) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L257	1052	pixel and (latch same counter) and time same voltage	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L256	2868	pixel and (latch same counter)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L255	122	(hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L254	54	(satoshi near1 shigematsu).in. and (hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L253	106	(satoshi near1 shigematsu).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L252	331	((voltage\$1 near7 time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L251	1025	((voltage\$1 same time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L250	1618	(voltage\$1 same time\$1) and row and column same pixel\$1 same digital	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L249	6327	(voltage\$1 same time\$1) and row and column same pixel\$1 and digital	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L248	8855	(voltage\$1 same time\$1) and row and column same pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L247	43993	(voltage\$1 same time\$1) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L246	55	348/30\$1 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L245	11	348/304 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L244	89	348/302 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L243	37	348/304 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L242	192	348/30\$1 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L241	273	348/30\$1 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L240	48	348/304 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L239	122	348/302 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L238	183	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) same counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L237	1543	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L236	0	"6587145".pn. and (column row) adj readout	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27



## EAST Search History

L235	15	L234 and (voltage near1 time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L234	30	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-5777596-\$ or US-5877715-\$ or US-5990948-\$ or US-6021172-\$ or US-6067113-\$ or US-6069377-\$ or US-6330030-\$ or US-6438257-\$ or US-6473122-\$ or US-6498576-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$ or US-6965407-\$). did. or (US-6990219-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L233	305	((voltage near1 time) voltage/time voltage\$1time) adj converter	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L232	0	((voltage near1 time) voltage/time voltage\$1time) adj converter and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L231	0	((voltage near1 time) voltage/time voltage\$1time) adj convertor and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L230	204	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and ((counter same latch) same clock\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L229	287	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and (counter same latch) and clock	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27

## EAST Search History

L228	305	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and (counter same latch)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L227	326	((voltage near1 time) voltage/time voltage\$1time) and row and column and (counter same latch)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L226	907	((voltage near1 time) voltage/time voltage\$1time) and row and column and count\$3 and latch	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L225	4722	((voltage near1 time) voltage/time voltage\$1time) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L224	122	(hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L223	106	(satoshi near1 shigematsu).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L222	0	10/059488 and amplif\$4	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L221	0	10/059488 and source\$1follower	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L220	0	10/059488 and source	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L219	17	L218 and amplifier	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L218	24	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5877715-\$ or US-5990948-\$ or US-6067113-\$ or US-6069377-\$ or US-6473122-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L217	258	(latch same counter) and (pixel same time same voltage) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L216	1052	pixel and (latch same counter) and time same voltage	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L215	2868	pixel and (latch same counter)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L214	122	(hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L213	54	(satoshi near1 shigematsu).in. and (hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L212	106	(satoshi near1 shigematsu).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L211	331	((voltage\$1 near7 time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L210	1025	((voltage\$1 same time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L209	1618	(voltage\$1 same time\$1) and row and column same pixel\$1 same digital	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L208	6327	(voltage\$1 same time\$1) and row and column same pixel\$1 and digital	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L207	8855	(voltage\$1 same time\$1) and row and column same pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L206	43993	(voltage\$1 same time\$1) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L205	55	348/30\$1 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L204	11	348/304 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L203	89	348/302 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L202	37	348/304 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L201	192	348/30\$1 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L200	273	348/30\$1 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L199	48	348/304 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L198	122	348/302 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L197	183	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) same counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L196	1543	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L195	2	US-5565915-\$.DID. OR US-5872596-\$.DID.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L194	562	L192 L193	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L193	134	348/304.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L192	463	348/302.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L191	1	10/059488 and start\$3	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L190	0	10/059488 and stagger\$4	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L189	31	(digital near2 camera near2 machine near2 vision) and simoni	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L188	43	(digital near2 camera near2 machine near2 vision)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L187	0	(digital near2 camera near2 for near2 machine near2 vision)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L186	0	(digital adj camera adj for adj machine adj vision)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L185	0	(digital adj camera adj for adj machine adj vision) near3 simoni	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L184	29	L179 and (voltage-time voltage/time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L183	6	("6556935").URPN.	USPAT	OR	OFF	2007/05/29 06:27
L182	3	("5325442"   "5577720"   "6259804").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L181	31	fingerprint\$3 and ((voltage\$1 near time) (voltage\$1time)) and (count\$3) and latch\$3	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L180	120	fingerprint\$3 and ((voltage\$1 near time) (voltage\$1time)) and (count\$3)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L179	207	fingerprint\$3 and ((voltage\$1 near time) (voltage\$1time))	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L178	17	L177 and ((voltage\$1 near time) (voltage\$1time))	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L177	39	(US-20020146156-\$ or US-20020181748-\$ or US-20060001753-\$ or US-20050231624-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20020126215-\$ or US-20020118289-\$ or US-20030107666-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-6556935-\$ or US-6438257-\$ or US-6473122-\$ or US-5565915-\$ or US-6552745-\$ or US-6947087-\$ or US-5777596-\$ or US-6580454-\$ or US-6498576-\$ or US-6665012-\$ or US-5877715-\$ or US-6583817-\$ or US-6990219-\$ or US-6067113-\$ or US-6965407-\$ or US-6330030-\$ or US-6021172-\$ or US-6600471-\$ or US-6069377-\$ or US-6753912-\$ or US-6727486-\$ or US-5990948-\$ or US-6587145-\$ or US-6590610-\$). did. or (US-6518910-\$ or US-6525304-\$ or US-6667769-\$ or US-5650643-\$ or US-5214274-\$ or US-6778212-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L176	463	348/302.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L175	134	348/304.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L174	358	348/312.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L173	39	(US-20020146156-\$ or US-20020181748-\$ or US-20060001753-\$ or US-20050231624-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20020126215-\$ or US-20020118289-\$ or US-20030107666-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-6556935-\$ or US-6438257-\$ or US-6473122-\$ or US-5565915-\$ or US-6552745-\$ or US-6947087-\$ or US-5777596-\$ or US-6580454-\$ or US-6498576-\$ or US-6665012-\$ or US-5877715-\$ or US-6583817-\$ or US-6990219-\$ or US-6067113-\$ or US-6965407-\$ or US-6330030-\$ or US-6021172-\$ or US-6600471-\$ or US-6069377-\$ or US-6753912-\$ or US-6727486-\$ or US-5990948-\$ or US-6587145-\$ or US-6590610-\$). did. or (US-6518910-\$ or US-6525304-\$ or US-6667769-\$ or US-5650643-\$ or US-5214274-\$ or US-6778212-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L172	255	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and stagger\$4 and (pixel\$1 sensor\$1)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L171	377	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and stagger\$4	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L170	629	a/d near2 pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L169	516	pixel and (latch same counter) and time same voltage and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L168	165	fowler.in. and voltage same time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L167	14	L166 and (voltage same time)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27

## EAST Search History

L166	18	("4563089"   "4710817"   "5065149"   "5214274"   "5373295"   "5452001"   "5461425"   "5468954"   "5565915"   "5576729"   "5650643"   "5665959"   "6166367"   "6201572"   "6330030").PN. OR ("6587145"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L165	7	"6587145"	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L164	6	L125 and (voltage near1 time) adj conver\$5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L163	60	((voltage near1 time) voltage/time voltage\$1time) adj conver\$5 and latch\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L162	20	((voltage near1 time) voltage/time voltage\$1time) adj converter and latch\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L161	71	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L160	8	(L115 L114) and ((voltage near1 time) voltage/time voltage\$1time) and matrix	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L159	2	(L115 L114) and ((voltage near1 time) voltage/time voltage\$1time) and column and row	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L158	2	(L115 L114) and ((voltage near1 time) voltage/time voltage\$1time) and counter and latch and row	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L157	4	(L115 L114) and ((voltage near1 time) voltage/time voltage\$1time) and counter and latch	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L156	12	(L115 L114) and ((voltage near1 time) voltage/time voltage\$1time)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L155	13	(digital adj pixel) same counter same latch\$3	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27



## EAST Search History

L154	8	fossum.in. and (digital adj pixel)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L153	2	fowler.in. and (digital adj pixel)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L152	42	(digital adj pixel).ti.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L151	31	(analog and digital and pixel).ti.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L150	2	a/d near2 pixel same row adj select	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L149	16	fowler.in. and voltage same time and pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L148	20	L109 and (amplifier source)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L147	5	L109 and voltage near2 conver\$5 near2 time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L146	14	L109 and voltage near2 conver\$5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L145	24	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5877715-\$ or US-5990948-\$ or US-6067113-\$ or US-6069377-\$ or US-6473122-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L144	70	"348"/\$6 and (latch same counter) and (pixel same time same voltage) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L143	12	(L105 L103) and ((voltage near1 time) voltage/time voltage\$1time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L142	16	((satoshi near1 shigematsu).in. and (hiroki near1 morimura).in.) and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L141	92	"348"/\$6 and ((voltage\$1 near7 time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L140	32	348/302 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L139	6	((voltage\$2time\$1)) near2 (converter\$1 conversion\$1) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L138	3	((voltage\$2time\$1)) same counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L137	1	"6330030".pn. and time	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L136	1	"6330030".pn. and counter	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L135	1	"6587145".pn.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L134	1	"6587145".pn. and (column row)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L133	1	"6587145".pn. and readout	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L132	1	"6587145".pn. and digital same time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L131	1	"6438257".pn. and digital same sense\$1	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L130	1	"6438257".pn. and digital same sense	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L129	1	"5471515".pn.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L128	1	10/059488	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L127	0	"6587145".pn. and (column row) adj readout	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L126	15	L125 and (voltage near1 time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L125	30	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-5777596-\$ or US-5877715-\$ or US-5990948-\$ or US-6021172-\$ or US-6067113-\$ or US-6069377-\$ or US-6330030-\$ or US-6438257-\$ or US-6473122-\$ or US-6498576-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$ or US-6965407-\$). did. or (US-6990219-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L124	305	((voltage near1 time) voltage/time voltage\$1time) adj converter	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L123	0	((voltage near1 time) voltage/time voltage\$1time) adj converter and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27

## EAST Search History

L122	0	((voltage near1 time) voltage/time voltage\$1time) adj convertor and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L121	204	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and ((counter same latch) same clock\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L120	287	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and (counter same latch) and clock	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L119	305	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and (counter same latch)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L118	326	((voltage near1 time) voltage/time voltage\$1time) and row and column and (counter same latch)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L117	907	((voltage near1 time) voltage/time voltage\$1time) and row and column and count\$3 and latch	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L116	4722	((voltage near1 time) voltage/time voltage\$1time) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L115	122	(hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L114	106	(satoshi near1 shigematsu).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L113	0	10/059488 and amplif\$4	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L112	0	10/059488 and source\$1follower	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L111	0	10/059488 and source	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L110	17	L109 and amplifier	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L109	24	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5877715-\$ or US-5990948-\$ or US-6067113-\$ or US-6069377-\$ or US-6473122-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L108	258	(latch same counter) and (pixel same time same voltage) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L107	1052	pixel and (latch same counter) and time same voltage	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L106	2868	pixel and (latch same counter)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L105	122	(hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L104	54	(satoshi near1 shigematsu).in. and (hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L103	106	(satoshi near1 shigematsu).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L102	331	((voltage\$1 near7 time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L101	1025	((voltage\$1 same time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L100	1618	(voltage\$1 same time\$1) and row and column same pixel\$1 same digital	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L99	6327	(voltage\$1 same time\$1) and row and column same pixel\$1 and digital	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L98	8855	(voltage\$1 same time\$1) and row and column same pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L97	43993	(voltage\$1 same time\$1) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L96	55	348/30\$1 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L95	11	348/304 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L94	89	348/302 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L93	37	348/304 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L92	192	348/30\$1 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L91	273	348/30\$1 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L90	48	348/304 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L89	122	348/302 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L88	183	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) same counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L87	1543	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L86	1098	348/302	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L85	359	348/304	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L84	1	"6330030".pn. and time	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L83	1	"6330030".pn. and counter	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L82	14	L81 and (voltage same time)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L81	18	("4563089"   "4710817"   "5065149"   "5214274"   "5373295"   "5452001"   "5461425"   "5468954"   "5565915"   "5576729"   "5650643"   "5665959"   "6166367"   "6201572"   "6330030").PN. OR ("6587145"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:27
L80	1	"6587145".pn.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L79	1	"6587145".pn. and (column row)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L78	1	"6587145".pn. and readout	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L77	0	"6587145".pn. and (column row) adj readout	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L76	1	"6587145".pn. and digital same time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L75	1	"6438257".pn. and digital same sense\$1	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L74	1	"6438257".pn. and digital same sense	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L73	7	"6587145"	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L72	6	L70 and (voltage near1 time) adj conver\$5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L71	15	L70 and (voltage near1 time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L70	30	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-5777596-\$ or US-5877715-\$ or US-5990948-\$ or US-6021172-\$ or US-6067113-\$ or US-6069377-\$ or US-6330030-\$ or US-6438257-\$ or US-6473122-\$ or US-6498576-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$ or US-6965407-\$). did. or (US-6990219-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L69	60	((voltage near1 time) voltage/time voltage\$1time) adj conver\$5 and latch\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L68	20	((voltage near1 time) voltage/time voltage\$1time) adj converter and latch\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L67	305	((voltage near1 time) voltage/time voltage\$1time) adj converter	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L66	0	((voltage near1 time) voltage/time voltage\$1time) adj converter and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L65	0	((voltage near1 time) voltage/time voltage\$1time) adj convertor and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27



## EAST Search History

L64	71	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L63	204	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and ((counter same latch) same clock\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L62	287	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and (counter same latch) and clock	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L61	305	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and (counter same latch)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L60	326	((voltage near1 time) voltage/time voltage\$1time) and row and column and (counter same latch)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L59	907	((voltage near1 time) voltage/time voltage\$1time) and row and column and count\$3 and latch	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L58	4722	((voltage near1 time) voltage/time voltage\$1time) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L57	8	(L52 L51) and ((voltage near1 time) voltage/time voltage\$1time) and matrix	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L56	2	(L52 L51) and ((voltage near1 time) voltage/time voltage\$1time) and column and row	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L55	2	(L52 L51) and ((voltage near1 time) voltage/time voltage\$1time) and counter and latch and row	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L54	4	(L52 L51) and ((voltage near1 time) voltage/time voltage\$1time) and counter and latch	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L53	12	(L52 L51) and ((voltage near1 time) voltage/time voltage\$1time)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27

## EAST Search History

L52	122	(hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L51	106	(satoshi near1 shigematsu).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L50	0	10/059488 and amplif\$4	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L49	0	10/059488 and source\$1follower	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L48	0	10/059488 and source	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L47	13	(digital adj pixel) same counter same latch\$3	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L46	8	fossum.in. and (digital adj pixel)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L45	2	fowler.in. and (digital adj pixel)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L44	42	(digital adj pixel).ti.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L43	31	(analog and digital and pixel).ti.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L42	629	a/d near2 pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L41	2	a/d near2 pixel same row adj select	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L40	1	"5471515".pn.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L39	16	fowler.in. and voltage same time and pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L38	165	fowler.in. and voltage same time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L37	20	L32 and (amplifier source)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L36	17	L32 and amplifier	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L35	5	L32 and voltage near2 conver\$5 near2 time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L34	14	L32 and voltage near2 conver\$5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L33	24	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5877715-\$ or US-5990948-\$ or US-6067113-\$ or US-6069377-\$ or US-6473122-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L32	24	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5877715-\$ or US-5990948-\$ or US-6067113-\$ or US-6069377-\$ or US-6473122-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L31	70	"348"/\$6 and (latch same counter) and (pixel same time same voltage) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L30	258	(latch same counter) and (pixel same time same voltage) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L29	516	pixel and (latch same counter) and time same voltage and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L28	1052	pixel and (latch same counter) and time same voltage	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L27	2868	pixel and (latch same counter)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:27
L26	12	(L24 L22) and ((voltage near1 time) voltage/time voltage\$1time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L25	16	((satoshi near1 shigematsu).in. and (hiroki near1 morimura).in.) and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L21	92	"348"/\$6 and ((voltage\$1 near7 time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L20	331	((voltage\$1 near7 time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L19	1025	((voltage\$1 same time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L18	1618	(voltage\$1 same time\$1) and row and column same pixel\$1 same digital	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L17	6327	(voltage\$1 same time\$1) and row and column same pixel\$1 and digital	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L16	8855	(voltage\$1 same time\$1) and row and column same pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L15	43993	(voltage\$1 same time\$1) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L14	32	348/302 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L13	55	348/30\$1 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L12	11	348/304 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L11	89	348/302 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L10	37	348/304 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L9	192	348/30\$1 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L8	273	348/30\$1 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L7	48	348/304 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27

## EAST Search History

L6	122	348/302 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L5	6	((voltage\$2time\$1)) near2 (converter\$1 conversion\$1) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L4	3	((voltage\$2time\$1)) same counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L3	183	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) same counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L2	1543	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L1	1	10/059488	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:27
L399	358	348/312.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L398	134	348/304.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L397	463	348/302.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L396	1	10/059488 and counter\$1	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L395	0	10/059488 and stagg\$5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L394	0	10/059488 and staggered	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L393	1	10/059488 and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L392	1098	348/302	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L391	629	a/d near2 pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28

## EAST Search History

L390	629	a/d near2 pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L389	516	pixel and (latch same counter) and time same voltage and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L388	516	pixel and (latch same counter) and time same voltage and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L387	359	348/304	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L386	255	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and stagger\$4 and (pixel\$1 sensor\$1)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L385	165	fowler.in. and voltage same time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L384	165	fowler.in. and voltage same time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L383	2	US-5565915-\$.DID. OR US-5872596-\$.DID.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L382	31	(digital near2 camera near2 machine near2 vision) and simoni	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L381	29	L380 and (voltage-time voltage/time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L380	207	fingerprint\$3 and ((voltage\$1 near time) (voltage\$1time))	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L379	6	("6556935").URPN.	USPAT	OR	OFF	2007/05/29 06:28
L378	3	("5325442"   "5577720"   "6259804").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:28
L377	31	fingerprint\$3 and ((voltage\$1 near time) (voltage\$1time)) and (count\$3) and latch\$3	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L376	17	L375 and ((voltage\$1 near time) (voltage\$1time))	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28

## EAST Search History

L375	39	(US-20020146156-\$ or US-20020181748-\$ or US-20060001753-\$ or US-20050231624-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20020126215-\$ or US-20020118289-\$ or US-20030107666-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-6556935-\$ or US-6438257-\$ or US-6473122-\$ or US-5565915-\$ or US-6552745-\$ or US-6947087-\$ or US-5777596-\$ or US-6580454-\$ or US-6498576-\$ or US-6665012-\$ or US-5877715-\$ or US-6583817-\$ or US-6990219-\$ or US-6067113-\$ or US-6965407-\$ or US-6330030-\$ or US-6021172-\$ or US-6600471-\$ or US-6069377-\$ or US-6753912-\$ or US-6727486-\$ or US-5990948-\$ or US-6587145-\$ or US-6590610-\$). did. or (US-6518910-\$ or US-6525304-\$ or US-6667769-\$ or US-5650643-\$ or US-5214274-\$ or US-6778212-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
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## EAST Search History

L374	39	(US-20020146156-\$ or US-20020181748-\$ or US-20060001753-\$ or US-20050231624-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20020126215-\$ or US-20020118289-\$ or US-20030107666-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-6556935-\$ or US-6438257-\$ or US-6473122-\$ or US-5565915-\$ or US-6552745-\$ or US-6947087-\$ or US-5777596-\$ or US-6580454-\$ or US-6498576-\$ or US-6665012-\$ or US-5877715-\$ or US-6583817-\$ or US-6990219-\$ or US-6067113-\$ or US-6965407-\$ or US-6330030-\$ or US-6021172-\$ or US-6600471-\$ or US-6069377-\$ or US-6753912-\$ or US-6727486-\$ or US-5990948-\$ or US-6587145-\$ or US-6590610-\$). did. or (US-6518910-\$ or US-6525304-\$ or US-6667769-\$ or US-5650643-\$ or US-5214274-\$ or US-6778212-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L373	14	L372 and (voltage same time)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:28
L372	18	("4563089"   "4710817"   "5065149"   "5214274"   "5373295"   "5452001"   "5461425"   "5468954"   "5565915"   "5576729"   "5650643"   "5665959"   "6166367"   "6201572"   "6330030").PN. OR ("6587145"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:28
L371	7	"6587145"	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L370	6	L275 and (voltage near1 time) adj conver\$5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28

## EAST Search History

L369	30	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-5777596-\$ or US-5877715-\$ or US-5990948-\$ or US-6021172-\$ or US-6067113-\$ or US-6069377-\$ or US-6330030-\$ or US-6438257-\$ or US-6473122-\$ or US-6498576-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$ or US-6965407-\$). did. or (US-6990219-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L368	60	((voltage near1 time) voltage/time voltage\$1time) adj conver\$5 and latch\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L367	20	((voltage near1 time) voltage/time voltage\$1time) adj converter and latch\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L366	71	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L365	8	(L265 L264) and ((voltage near1 time) voltage/time voltage\$1time) and matrix	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L364	2	(L265 L264) and ((voltage near1 time) voltage/time voltage\$1time) and column and row	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L363	2	(L265 L264) and ((voltage near1 time) voltage/time voltage\$1time) and counter and latch and row	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28

## EAST Search History

L362	4	(L265 L264) and ((voltage near1 time) voltage/time voltage\$1time) and counter and latch	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L361	12	(L265 L264) and ((voltage near1 time) voltage/time voltage\$1time)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L360	13	(digital adj pixel) same counter same latch\$3	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L359	8	fossum.in. and (digital adj pixel)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L358	2	fowler.in. and (digital adj pixel)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L357	42	(digital adj pixel).ti.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L356	31	(analog and digital and pixel).ti.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L355	2	a/d near2 pixel same row adj select	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L354	16	fowler.in. and voltage same time and pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L353	20	L259 and (amplifier source)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L352	5	L259 and voltage near2 conver\$5 near2 time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L351	14	L259 and voltage near2 conver\$5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28

## EAST Search History

L350	24	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5877715-\$ or US-5990948-\$ or US-6067113-\$ or US-6069377-\$ or US-6473122-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L349	24	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5877715-\$ or US-5990948-\$ or US-6067113-\$ or US-6069377-\$ or US-6473122-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L348	70	"348"/\$6 and (latch same counter) and (pixel same time same voltage) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L347	12	(L255 L253) and ((voltage near1 time) voltage/time voltage\$1time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28

## EAST Search History

L346	16	((satoshi near1 shigematsu).in. and (hiroki near1 morimura).in.) and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L345	92	"348"/\$6 and ((voltage\$1 near7 time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L344	32	348/302 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L343	6	((voltage\$2time\$1)) near2 (converter\$1 conversion\$1) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L342	3	((voltage\$2time\$1)) same counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L341	14	L340 and (voltage same time)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:28
L340	18	("4563089"   "4710817"   "5065149"   "5214274"   "5373295"   "5452001"   "5461425"   "5468954"   "5565915"   "5576729"   "5650643"   "5665959"   "6166367"   "6201572"   "6330030").PN. OR ("6587145"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/05/29 06:28
L339	7	"6587145"	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L338	6	L234 and (voltage near1 time) adj conver\$5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:28
L337	60	((voltage near1 time) voltage/time voltage\$1time) adj conver\$5 and latch\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L336	20	((voltage near1 time) voltage/time voltage\$1time) adj converter and latch\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L335	71	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L334	8	(L224 L223) and ((voltage near1 time) voltage/time voltage\$1time) and matrix	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28

## EAST Search History

L333	2	(L224 L223) and ((voltage near1 time) voltage/time voltage\$1time) and column and row	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L332	2	(L224 L223) and ((voltage near1 time) voltage/time voltage\$1time) and counter and latch and row	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/05/29 06:28
L24	122	(hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:37
L23	54	(satoshi near1 shigematsu).in. and (hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:37
L22	106	(satoshi near1 shigematsu).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/05/29 06:37